DOCUMENT RESUME

ED 467 280 PS 030 551

| | |
|---|---|
| AUTHOR | Sullivan, Ashley F.; Choi, Eunyoung |
| TITLE | Hunger and Food Insecurity in the Fifty States: 1998-2000. |
| INSTITUTION | Brandeis Univ., Waltham, MA. Food Security Inst. |
| PUB DATE | 2002-08-00 |
| NOTE | 10p. |
| AVAILABLE FROM | Center on Hunger and Poverty, Heller Graduate School, Brandeis University, Mailstop 077, Waltham, MA 02454-9110. Tel: 781-736-8885. For full text: http://www.centeronhunger.org/pdf/ statedata98-00.pdf. |
| PUB TYPE | Numerical/Quantitative Data (110) -- Reports - Research (143) |
| EDRS PRICE | EDRS Price MF01 Plus Postage. PC Not Available from EDRS |
| DESCRIPTORS | Children; Family (Sociological Unit); *Hunger; *Incidence; National Surveys; Poverty; *Social Problems; Tables (Data) |
| IDENTIFIERS | *Food Security |

ABSTRACT

Noting that the persistence of hunger and food insecurity in the United States is an issue of pressing social and public health concern, this study examined the magnitude and severity of hunger and food insecurity in U.S. households in each of the 50 states and the District of Columbia. Data were obtained from the August 1998, April 1999, and September 2000 Food Security Supplements of the Current Population Survey, a survey of about 50,000 households at state and national levels. The full interviewed sample represents the total national and state-level non-institutionalized population. Among the major findings of the study were that over 11 million households containing more than 33 million individuals reported limited or uncertain access to sufficient food due to inadequate resources. Nearly 3.3 million households reported hunger. At the state level, food insecurity and hunger varied considerably during 1998 to 2000, with the prevalence of food insecurity ranging from a low of 7.5 percent of households in New Hampshire to a high of 15.9 percent in New Mexico. The national rate was 10.8 percent. A band of states running from the Pacific Northwest through the Gulf of Mexico continues to demonstrate higher than average food insecurity and hunger rates. California, Texas, and Florida accounted for nearly a third of all individuals living in food insecure households. (Data tables present state prevalence rates of food insecurity and hunger, number of food insecure and hungry households, number of individuals in food insecure and hungry households--adults and children, and estimated margins of error for numbers of individuals in food insecure and hungry households--adults and children). (KB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 467 280

# HUNGER AND FOOD INSECURITY IN THE FIFTY STATES: 1998-2000

FOOD SECURITY INSTITUTE
Ashley F. Sullivan
Eunyoung Choi

IPS 030551

AUGUST 2002

CENTER ON HUNGER AND POVERTY
HELLER SCHOOL FOR SOCIAL POLICY & MANAGEMENT
BRANDEIS UNIVERSITY

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY
J. Larry Brown
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)



2A
BEST COPY AVAILABLE

## INTRODUCTION

The persistence of hunger and food insecurity in the United States is an issue of pressing social and public health concern as millions of American families experience food-related hardships due to insufficient resources. Data describing the magnitude and severity of hunger and food insecurity in the United States was enhanced in the mid 1990s with the development of a new household survey instrument – the U.S. Food Security Survey Module.

Six years of national data on U.S. household food security and hunger are now publicly available. Since the mid-1990s, growing numbers of studies using the new household food security survey also have documented levels of food insecurity and hunger among specific at-risk populations in the United States, such as children, the elderly, immigrants, emergency food assistance recipients, and welfare recipients. However, an important data dimension that has been missing is the release of timely state-level data that can be utilized by researchers, policymakers, and the public. Using the just-released 2000 government data on hunger and food insecurity, the Food Security Institute has calculated:

1. The **prevalence** of hunger and food insecurity in each state for the three-year period 1998 to 2000 (see table 1).
2. The **number of households** in each state that experienced hunger and food insecurity from 1998 to 2000 (see table 2).
3. The **numbers of adults and children** in each state living in hungry and food insecure households for 1998 to 2000 (see table 3).

Details on the methods used, definitions, and further resources are provided at the end of the report.

Among the highlights of the newly released national data and this state level analysis (all based on the 90% confidence level) are the following:

- Over 11 million households containing more than 33 million individuals in the United States reported limited or uncertain access to sufficient food due to inadequate resources. Nearly 3.3 million of these households reported hunger.
- At the state level, food insecurity and hunger varied considerably during 1998 to 2000, with the prevalence of food insecurity ranging from a low of 7.5% of households in New Hampshire to a high of 15.9% in New Mexico. The national rate for the same three-year period was 10.8%.
- A band of states running from the Pacific Northwest through the Gulf of Mexico continues to demonstrate higher than average food insecurity and hunger rates.
- The states with the highest levels of food insecurity were:

| | |
|---|---|
| New Mexico (15.87%) | Arizona (13.13%) |
| Texas (14.87%) | Idaho (13.10%) |
| Oregon (14.33%) | Mississippi (13.10%) |
| Louisiana (13.93%) | Montana (13.00%) |
| Oklahoma (13.50%) | Washington (12.93%) |

- The states with the highest hunger prevalence were:

| | |
|---|---|
| Oregon (6.20%) | Idaho (4.33%) |
| Washington (5.03%) | Alaska (4.27%) |
| New Mexico (4.57%) | Florida (4.03%) |
| Utah (4.43%) | Oklahoma (3.93%) |
| Texas (4.37%) | Tennessee (3.90%) |

- The states with the lowest food insecurity prevalence were:

| | |
|---|---|
| Delaware (7.87%) | Massachusetts (7.70%) |
| Indiana (7.87%) | Iowa (7.67%) |
| Minnesota (7.83%) | New Hampshire (7.50%) |

- Seven states accounted for nearly half (49.4%) of all individuals living in food insecure households; California, Texas, and Florida accounted for nearly a third (32.4%) of all individuals living in food insecure households in the U.S.

| | |
|---|---|
| California (5,120,000) | Illinois (1,371,000) |
| Texas (3,610,000) | Ohio (1,155,000) |
| Florida (2,098,000) | Pennsylvania (1,135,000) |
| New York (2,050,000) | |

- The states whose relative food insecurity status worsened most (moved more than 10 places in the rankings) during the comparative time periods (1996-1998 versus 1998-2000) were:

| | |
|---|---|
| Utah (13)[1] | Vermont (11) |
| North Dakota (12) | Idaho (11) |

- The states whose relative hunger status worsened most (moved more than 10 places in the rankings) during the comparative time periods (1996-1998 versus 1998-2000) were:

| | |
|---|---|
| Utah (24) | Nebraska (16) |
| Montana (19) | West Virginia (13) |
| Idaho (17) | Alaska (12) |

- Researchers are perplexed about a number of outcomes that require further analysis, including the following:
  - The relatively high prevalence of hunger in the Northwest, particularly Oregon and Washington,
  - The relatively high prevalence of hunger in Texas (4.37%; rank = 5) and Florida (4.03%; 8th) in comparison with other heavily-populated states such as California (3.63%; tied for 15th), New York (3.43%; tied for 20th), Pennsylvania (2.40%; 41st), Ohio (2.70%; 36th) and Illinois (2.97%; 28th), and
  - The poorer rankings in *both* food insecurity and hunger in states such as Utah, Idaho, Nebraska, Alaska, Montana, and Wisconsin.

[1] Figures in parentheses indicate the number of places moved in the rankings.

## TABLE 1. STATE PREVALENCE RATES OF FOOD INSECURITY AND HUNGER, AVERAGE 1998-2000

| State | Food Insecure | | | Food Insecure with Hunger | | |
|---|---|---|---|---|---|---|
| | Percent of households | Margin of error* | Rank | Percent of households | Margin of error* | Rank |
| US average | 10.77 | 0.15 | -- | 3.27 | 0.09 | -- |
| AL | 11.70 | 1.22 | 16t | 3.30 | 0.67 | 22 |
| AK | 9.73 | 1.28 | 31 | 4.27 | 0.87 | 7 |
| AZ | 13.13 | 1.20 | 6 | 3.50 | 0.66 | 19 |
| AR | 11.70 | 1.23 | 16t | 3.20 | 0.67 | 24t |
| CA | 12.57 | 0.54 | 12 | 3.63 | 0.31 | 15t |
| CO | 9.23 | 1.10 | 33 | 2.63 | 0.61 | 37 |
| CT | 8.17 | 1.20 | 43t | 2.90 | 0.74 | 29 |
| DE | 7.87 | 1.19 | 46t | 2.70 | 0.71 | 34t |
| DC | 11.97 | 1.24 | 15 | 3.80 | 0.73 | 12t |
| FL | 12.30 | 0.65 | 14 | 4.03 | 0.39 | 8 |
| GA | 10.73 | 1.10 | 21t | 3.57 | 0.66 | 18 |
| HI | 11.70 | 1.48 | 16t | 2.70 | 0.74 | 34t |
| ID | 13.10 | 1.29 | 7t | 4.33 | 0.78 | 6 |
| IL | 9.80 | 0.71 | 29 | 2.97 | 0.40 | 28 |
| IN | 7.87 | 1.01 | 46t | 2.27 | 0.56 | 44t |
| IA | 7.67 | 1.02 | 50 | 2.00 | 0.54 | 50 |
| KS | 11.30 | 1.21 | 19 | 3.43 | 0.69 | 20t |
| KY | 10.13 | 1.18 | 26 | 3.20 | 0.69 | 24t |
| LA | 13.93 | 1.29 | 4 | 3.87 | 0.71 | 11 |
| ME | 10.03 | 1.23 | 28 | 3.03 | 0.70 | 27 |
| MD | 8.67 | 1.15 | 36t | 3.10 | 0.70 | 26 |
| MA | 7.70 | 0.81 | 49 | 2.37 | 0.46 | 42t |
| MI | 8.47 | 0.70 | 40 | 2.20 | 0.37 | 46 |
| MN | 7.83 | 1.03 | 48 | 2.37 | 0.58 | 42t |
| MS | 13.10 | 1.27 | 7t | 3.27 | 0.67 | 23 |
| MO | 8.27 | 1.10 | 42 | 2.03 | 0.55 | 49 |
| MT | 13.00 | 1.26 | 9 | 3.80 | 0.72 | 12t |
| NE | 9.33 | 1.17 | 32 | 2.87 | 0.67 | 30 |
| NV | 10.67 | 1.23 | 25 | 3.77 | 0.75 | 14 |
| NH | 7.50 | 1.17 | 51 | 2.47 | 0.68 | 40 |
| NJ | 8.73 | 0.75 | 35 | 2.77 | 0.44 | 32 |
| NM | 15.87 | 1.42 | 1 | 4.57 | 0.81 | 3 |
| NY | 10.70 | 0.57 | 23t | 3.43 | 0.34 | 20t |
| NC | 9.77 | 0.82 | 30 | 2.60 | 0.44 | 38 |
| ND | 8.57 | 1.05 | 39 | 1.93 | 0.51 | 51 |
| OH | 8.63 | 0.66 | 38 | 2.70 | 0.38 | 36 |
| OK | 13.50 | 1.24 | 5 | 3.93 | 0.70 | 9 |
| OR | 14.33 | 1.46 | 3 | 6.20 | 1.01 | 1 |
| PA | 8.43 | 0.62 | 41 | 2.40 | 0.34 | 41 |
| RI | 8.67 | 1.24 | 36t | 2.73 | 0.71 | 33 |
| SC | 11.03 | 1.24 | 20 | 3.60 | 0.74 | 17 |
| SD | 8.07 | 0.99 | 45 | 2.27 | 0.54 | 44t |
| TN | 12.37 | 1.35 | 13 | 3.90 | 0.79 | 10 |
| TX | 14.87 | 0.72 | 2 | 4.37 | 0.41 | 5 |
| UT | 12.67 | 1.32 | 11 | 4.43 | 0.82 | 4 |
| VT | 10.10 | 1.30 | 27 | 2.17 | 0.60 | 47 |
| VA | 8.17 | 1.03 | 43t | 2.10 | 0.53 | 48 |
| WA | 12.93 | 1.37 | 10 | 5.03 | 0.90 | 2 |
| WV | 10.73 | 1.07 | 21t | 3.63 | 0.65 | 15t |
| WI | 8.83 | 1.05 | 34 | 2.53 | 0.58 | 39 |
| WY | 10.70 | 1.18 | 23t | 2.83 | 0.62 | 31 |

* Margins of error are reported in percentage points at the 90% confidence level.

't' indicates a tied ranking. A rank of '1' indicates the highest prevalence.

Source: Calculated by FSI based on Current Population Survey Food Security Supplement data, August 1998, April 1999, and September 2000.

BEST COPY AVAILABLE

## TABLE 2. NUMBER OF FOOD INSECURE & HUNGRY HOUSEHOLDS, AVERAGE 1998-2000

| State | Food Insecure | | Food Insecure with Hunger | | Total number of households (thousands) |
|---|---|---|---|---|---|
| | Number of households (thousands) | Estimated margin of error* (thousands) | Number of households (thousands) | Estimated margin of error* (thousands) | |
| US average | 11,273 | 164 | 3,420 | 92 | 104,679 |
| AL | 202 | 22 | 57 | 12 | 1,724 |
| AK | 21 | 3 | 9 | 2 | 210 |
| AZ | 239 | 24 | 64 | 12 | 1,830 |
| AR | 119 | 13 | 33 | 7 | 1,015 |
| CA | 1,505 | 69 | 434 | 37 | 11,985 |
| CO | 146 | 18 | 42 | 10 | 1,585 |
| CT | 105 | 16 | 38 | 10 | 1,299 |
| DE | 23 | 4 | 8 | 2 | 288 |
| DC | 31 | 3 | 10 | 2 | 263 |
| FL | 759 | 43 | 250 | 25 | 6,154 |
| GA | 307 | 33 | 102 | 19 | 2,859 |
| HI | 49 | 7 | 11 | 3 | 418 |
| ID | 59 | 6 | 19 | 4 | 452 |
| IL | 442 | 34 | 134 | 18 | 4,506 |
| IN | 185 | 25 | 53 | 13 | 2,362 |
| IA | 89 | 12 | 23 | 6 | 1,166 |
| KS | 120 | 14 | 36 | 7 | 1,067 |
| KY | 157 | 19 | 50 | 11 | 1,547 |
| LA | 236 | 24 | 66 | 12 | 1,694 |
| ME | 52 | 7 | 16 | 4 | 518 |
| MD | 176 | 24 | 63 | 15 | 2,032 |
| MA | 180 | 20 | 55 | 11 | 2,328 |
| MI | 316 | 27 | 82 | 14 | 3,728 |
| MN | 142 | 20 | 43 | 11 | 1,817 |
| MS | 142 | 15 | 36 | 7 | 1,077 |
| MO | 179 | 25 | 44 | 12 | 2,156 |
| MT | 46 | 5 | 14 | 3 | 355 |
| NE | 59 | 8 | 18 | 4 | 636 |
| NV | 72 | 9 | 25 | 5 | 676 |
| NH | 36 | 6 | 12 | 3 | 477 |
| NJ | 264 | 24 | 84 | 13 | 3,010 |
| NM | 105 | 10 | 30 | 5 | 663 |
| NY | 738 | 41 | 237 | 24 | 6,898 |
| NC | 300 | 27 | 80 | 14 | 3,066 |
| ND | 23 | 3 | 5 | 1 | 265 |
| OH | 393 | 31 | 122 | 17 | 4,580 |
| OK | 181 | 18 | 53 | 10 | 1,346 |
| OR | 183 | 20 | 79 | 13 | 1,276 |
| PA | 400 | 31 | 115 | 16 | 4,722 |
| RI | 34 | 5 | 11 | 3 | 394 |
| SC | 172 | 21 | 56 | 12 | 1,561 |
| SD | 24 | 3 | 7 | 2 | 298 |
| TN | 261 | 30 | 82 | 17 | 2,117 |
| TX | 1,091 | 58 | 320 | 31 | 7,348 |
| UT | 87 | 10 | 30 | 6 | 682 |
| VT | 24 | 3 | 5 | 1 | 241 |
| VA | 216 | 29 | 56 | 14 | 2,652 |
| WA | 289 | 33 | 113 | 21 | 2,242 |
| WV | 84 | 9 | 29 | 5 | 783 |
| WI | 187 | 23 | 55 | 13 | 2,114 |
| WY | 21 | 2 | 6 | 1 | 195 |

* Margins of error are reported in thousands at the 90% confidence level. Parameters to calculate margins of error were adjusted to reflect changes in sample size. The stated margins of error are conservative estimates and may therefore overstate the true margins of error.
Source: Calculated by FSI based on Current Population Survey Food Security Supplement data, August 1998, April 1999, and September 2000.

BEST COPY AVAILABLE



Food Security Institute
Center on Hunger and Poverty

Heller Graduate School
Brandeis University

## TABLE 3. NUMBERS OF INDIVIDUALS* IN FOOD INSECURE & HUNGRY HOUSEHOLDS, ADULTS & CHILDREN 1998-2000

| State | Adults* | | Children* | | All Individuals* | | Total number of individuals* |
|---|---|---|---|---|---|---|---|
| | Food insecure | Food insecure with hunger | Food insecure | Food insecure with hunger | Food insecure | Food insecure with hunger | |
| US average | 20,433 | 5,704 | 13,031 | 3,015 | 33,464 | 8,719 | 270,790 |
| AL | 354 | 89 | 221 | 31 | 575 | 120 | 4,520 |
| AK | 37 | 15 | 29 | 10 | 66 | 25 | 582 |
| AZ | 504 | 117 | 367 | 67 | 871 | 184 | 4,881 |
| AR | 203 | 51 | 128 | 23 | 331 | 74 | 2,463 |
| CA | 3,031 | 806 | 2,089 | 447 | 5,120 | 1,253 | 33,315 |
| CO | 254 | 61 | 182 | 39 | 436 | 101 | 4,011 |
| CT | 184 | 63 | 96 | 33 | 280 | 96 | 3,355 |
| DE | 40 | 12 | 30 | 9 | 70 | 20 | 739 |
| DC | 49 | 16 | 24 | 6 | 73 | 22 | 535 |
| FL | 1,336 | 413 | 762 | 200 | 2,098 | 614 | 14,991 |
| GA | 568 | 166 | 348 | 98 | 916 | 264 | 7,287 |
| HI | 96 | 23 | 62 | 13 | 158 | 36 | 1,170 |
| ID | 111 | 36 | 88 | 24 | 198 | 60 | 1,219 |
| IL | 801 | 232 | 571 | 130 | 1,371 | 362 | 11,824 |
| IN | 338 | 93 | 209 | 66 | 547 | 159 | 5,925 |
| IA | 142 | 35 | 101 | 21 | 243 | 56 | 2,892 |
| KS | 204 | 55 | 146 | 37 | 350 | 91 | 2,690 |
| KY | 242 | 69 | 126 | 23 | 368 | 92 | 3,764 |
| LA | 439 | 129 | 286 | 58 | 724 | 186 | 4,393 |
| ME | 87 | 25 | 44 | 7 | 131 | 32 | 1,295 |
| MD | 352 | 128 | 142 | 43 | 494 | 170 | 5,128 |
| MA | 284 | 83 | 192 | 36 | 476 | 119 | 5,747 |
| MI | 550 | 123 | 400 | 58 | 950 | 181 | 9,894 |
| MN | 241 | 69 | 171 | 24 | 413 | 93 | 4,830 |
| MS | 267 | 65 | 161 | 35 | 428 | 100 | 2,801 |
| MO | 296 | 77 | 176 | 36 | 473 | 112 | 5,343 |
| MT | 77 | 20 | 53 | 12 | 130 | 32 | 890 |
| NE | 103 | 26 | 76 | 19 | 178 | 44 | 1,659 |
| NV | 128 | 42 | 107 | 32 | 235 | 74 | 1,877 |
| NH | 60 | 18 | 42 | 11 | 101 | 30 | 1,233 |
| NJ | 494 | 139 | 252 | 57 | 746 | 196 | 8,034 |
| NM | 197 | 55 | 150 | 53 | 347 | 107 | 1,772 |
| NY | 1,266 | 372 | 784 | 213 | 2,050 | 585 | 17,788 |
| NC | 518 | 133 | 284 | 62 | 803 | 195 | 7,496 |
| ND | 38 | 7 | 28 | 5 | 66 | 13 | 655 |
| OH | 661 | 181 | 495 | 129 | 1,155 | 309 | 11,642 |
| OK | 299 | 84 | 183 | 44 | 482 | 128 | 3,325 |
| OR | 322 | 135 | 188 | 55 | 510 | 190 | 3,233 |
| PA | 741 | 200 | 393 | 75 | 1,135 | 275 | 12,168 |
| RI | 54 | 15 | 37 | 4 | 91 | 20 | 963 |
| SC | 293 | 84 | 146 | 30 | 439 | 114 | 3,922 |
| SD | 43 | 12 | 26 | 5 | 68 | 17 | 734 |
| TN | 440 | 126 | 222 | 51 | 662 | 177 | 5,216 |
| TX | 2,151 | 559 | 1,460 | 353 | 3,610 | 912 | 20,152 |
| UT | 170 | 54 | 113 | 31 | 283 | 85 | 2,062 |
| VT | 41 | 8 | 26 | 3 | 67 | 11 | 576 |
| VA | 362 | 81 | 231 | 41 | 594 | 121 | 6,493 |
| WA | 485 | 162 | 286 | 92 | 770 | 254 | 5,706 |
| WV | 150 | 49 | 59 | 16 | 208 | 65 | 1,782 |
| WI | 296 | 82 | 214 | 45 | 510 | 127 | 5,312 |
| WY | 34 | 9 | 26 | 6 | 60 | 14 | 507 |

* Numbers are reported in thousands. Margins of error for these estimates are reported in Table 4.

Caution should be used when using Table 3 to make statements about the total number of individuals, adults, or children experiencing food insecurity and food insecurity with hunger. Households are classified as food insecure or food insecure with hunger based on the experiences of one member. Not all individuals in food insecure or hungry households necessarily experience food insecurity or hunger. Except under severe circumstances, children, in particular, are likely to be protected from hunger by their parents even while adults in the same households reduce their food intake or skip meals.



BEST COPY AVAILABLE

## TABLE 4. ESTIMATED MARGINS OF ERROR* FOR NUMBERS OF INDIVIDUALS IN FOOD INSECURE & HUNGRY HOUSEHOLDS, ADULTS & CHILDREN 1998-2000

| State | Adults* | | Children* | | Individuals* | |
|---|---|---|---|---|---|---|
| | Food insecure | Food insecure with hunger | Food insecure | Food insecure with hunger | Food insecure | Food insecure with hunger |
| US average | 351 | 189 | 338 | 164 | 513 | 271 |
| AL | 47 | 23 | 43 | 15 | 69 | 31 |
| AK | 6 | 4 | 6 | 4 | 10 | 6 |
| AZ | 55 | 27 | 56 | 24 | 84 | 39 |
| AR | 28 | 14 | 27 | 11 | 41 | 19 |
| CA | 158 | 82 | 147 | 68 | 233 | 116 |
| CO | 39 | 19 | 38 | 18 | 59 | 28 |
| CT | 34 | 20 | 29 | 17 | 48 | 29 |
| DE | 8 | 4 | 8 | 4 | 12 | 6 |
| DC | 7 | 4 | 8 | 4 | 11 | 6 |
| FL | 91 | 50 | 88 | 45 | 134 | 73 |
| GA | 73 | 39 | 66 | 35 | 106 | 57 |
| HI | 15 | 7 | 14 | 7 | 22 | 11 |
| ID | 14 | 8 | 15 | 8 | 22 | 12 |
| IL | 72 | 39 | 52 | 32 | 108 | 55 |
| IN | 54 | 28 | 48 | 25 | 78 | 41 |
| IA | 25 | 12 | 24 | 11 | 37 | 18 |
| KS | 29 | 15 | 28 | 14 | 43 | 22 |
| KY | 38 | 21 | 33 | 13 | 55 | 27 |
| LA | 52 | 27 | 48 | 22 | 77 | 38 |
| ME | 14 | 7 | 13 | 5 | 20 | 10 |
| MD | 55 | 33 | 44 | 24 | 77 | 46 |
| MA | 39 | 21 | 38 | 16 | 59 | 29 |
| MI | 57 | 27 | 56 | 21 | 86 | 38 |
| MN | 41 | 22 | 39 | 15 | 61 | 29 |
| MS | 32 | 16 | 31 | 14 | 48 | 23 |
| MO | 51 | 26 | 47 | 21 | 75 | 36 |
| MT | 10 | 5 | 10 | 5 | 15 | 7 |
| NE | 17 | 8 | 16 | 8 | 25 | 12 |
| NV | 19 | 11 | 19 | 11 | 29 | 16 |
| NH | 12 | 7 | 12 | 6 | 18 | 10 |
| NJ | 52 | 27 | 43 | 20 | 73 | 38 |
| NM | 22 | 12 | 23 | 14 | 35 | 19 |
| NY | 87 | 47 | 83 | 43 | 129 | 69 |
| NC | 56 | 28 | 50 | 23 | 81 | 40 |
| ND | 6 | 3 | 6 | 3 | 9 | 4 |
| OH | 65 | 34 | 64 | 32 | 98 | 50 |
| OK | 37 | 20 | 34 | 17 | 55 | 28 |
| OR | 43 | 28 | 38 | 20 | 62 | 38 |
| PA | 67 | 34 | 58 | 25 | 95 | 47 |
| RI | 10 | 5 | 10 | 3 | 15 | 7 |
| SC | 43 | 23 | 37 | 17 | 61 | 31 |
| SD | 7 | 3 | 6 | 3 | 10 | 5 |
| TN | 63 | 34 | 53 | 25 | 90 | 46 |
| TX | 129 | 65 | 122 | 59 | 192 | 96 |
| UT | 22 | 12 | 20 | 10 | 32 | 18 |
| VT | 7 | 3 | 7 | 2 | 11 | 4 |
| VA | 59 | 28 | 56 | 24 | 88 | 39 |
| WA | 68 | 39 | 59 | 34 | 98 | 56 |
| WV | 19 | 11 | 15 | 8 | 26 | 15 |
| WI | 47 | 25 | 47 | 22 | 71 | 36 |
| WY | 5 | 2 | 5 | 2 | 8 | 4 |

* Estimate margins of error are reported in thousands at the 90% confidence level. Parameters to calculate margins of error were adjusted to reflect changes in sample size. The stated margins of error are conservative estimates and may therefore overstate the true margins of error.

Source: Calculated by FSI based on Current Population Survey Food Security Supplement data, August 1998, April 1999, and September 2000.



BEST COPY AVAILABLE

## Data Sources

Calculations are based on data from August 1998, April 1999, and September 2000 Food Security Supplements of the Current Population Survey (CPS).

The CPS is a survey of about 50,000 households, representative of households at state and national levels, conducted monthly by the U.S. Census Bureau for the U.S. Department of Labor, Bureau of Labor Statistics. Once a year, the Food Security Supplement is administered to households in the sample. The supplement includes questions about food security, food spending, use of Federal food programs, and use of private food assistance. The U.S. Food Security Survey Module is part of the supplement and consists of an 18-item instrument administered to the household head. The least severe items ask whether the household worried about or experienced running out of food, and had no money to buy more. The more severe items indicate reduced food intake and hunger for children in the household or more severe hunger for adults.

## Methods

Although the number of households surveyed each year for the CPS is large enough to produce national estimates, it is too small to produce reliable estimates for many states. Therefore, three years of data were combined to improve reliability.

After excluding non-interview households and persons, household and individual weights were applied to the data so that the full interviewed sample represents the total national and state-level noninstitutionalized populations. All prevalence rates, margins of error, and estimates of numbers of households and individuals were then calculated for each of the three years and averaged over the 1998 to 2000 period.

Margins of error were calculated at 90% confidence intervals, which means that there is 90% certainty that the actual percentage falls somewhere in the range of plus or minus the margin of error. For example, we are 90% certain that the food insecurity rate in Wyoming is between 9.52% and 11.88% (10.70% +/- 1.18). Margins of error were determined using the general variance estimation (GVE) procedures specified by the Census Bureau in its "Source and Accuracy Statement" for the Food Security Supplement of 1998 and 1999, and for the March CPS microdata files for 2000. Data parameters used to calculate margins of error for percentages were adjusted to account for a loss in sample size since part of the 8th rotation was not used to estimate prevalence rates in 1998 and 1999, and a small proportion of households decline to complete the supplement each year. Parameters used to calculate margins of error for numbers of food insecure and hungry households and individuals were adjusted to maximize the margin of error. (For a complete description of standard error calculations and adjustments, see Cohen, E. et al (2002), *Household Food Security in the United States, 1998 and 1999: Technical Report*, http://www.ers.usda.gov/publications/efan02010/.) Margins of error should be considered when interpreting estimates by state, since state estimates can have sizeable margins of error, even with three years of data.

Caution should be used when using Table 3 to make statements about the total number of individuals, adults, or children experiencing food insecurity and food insecurity with hunger. Households are classified as food insecure or food insecure with hunger based on the experiences of one member who answered questions for the entire household. The respondent was not asked about the food security status of each household member. Not all individuals in hungry households necessarily experience hunger. Except under severe circumstances, children, in particular, are likely to be protected from hunger by their parents even while adults in the same households reduce their food intake or skip meals.

State-level estimates presented in this report are not comparable to the state-level estimates for the period 1996 to 1998 that were released in 1999 by the U.S. Department of Agriculture in a report titled *Prevalence of Food Insecurity and Hunger by State, 1996-1998*. This is because the prior three-year averages were based on data adjusted for differences created by the use of different screening questions during the administration of the survey in each of the three years. Beginning in 1998, the same screening questions were employed, thus eliminating the need for such adjustments.

## Food Security Definitions

Extensive research has led to the following definitions, which are foundational to the food security measurement paradigm used in the CPS Food Security Supplements.[2]

- **Food security** refers to access to enough food at all times for an active and healthy life. At a minimum, food security includes: the ready availability of nutritionally adequate and safe foods, and an assured ability to acquire acceptable foods in socially acceptable ways (without resorting to emergency food supplies, scavenging, stealing, or other coping strategies, for example).
- **Food insecurity** occurs whenever the availability of nutritionally adequate and safe foods, or the ability to acquire acceptable foods in socially acceptable ways, is limited or uncertain.
- **Hunger** is the uneasy or painful sensation caused by a recurrent or involuntary lack of food and is a potential, although not necessary consequence of food insecurity. Over time, hunger may result in malnutrition.

## Additional Resources and Information

For additional references and technical information related to food security measurement, see the web sites of the Food Security Institute at the Center on Hunger and Poverty (http://www.centeronhunger.org) and the USDA's Food Security Briefing Room (http://www.ers.usda.gov/briefing/FoodSecurity/).

For a comprehensive listing of hunger and food insecurity reports by state, see the Food Security Institute's frequently updated indices of recent studies (http://www.centeronhunger.org/FSI/research.htm).


## Acknowledgments

The Food Security Institute wishes to acknowledge Drs. J. Larry Brown and Dorie Seavey for their guidance and support throughout this project.


### ADDITIONAL RESOURCES FROM THE FOOD SECURITY INSTITUTE

**On-Line Guide to Recent Hunger and Food Insecurity Studies:** Visit FSI's guide to recent studies at http://www.centeronhunger.org/FSI/fsiguide.html. Find links to household food security studies on hunger and emergency food demand by state, as well as research on the impact of hunger and food insecurity on health and development. Indices are frequently updated to provide the most up-to-date listing of food security and hunger research references available.

**Household Food Security Study Summaries - 2001 Edition** (July 2001). This publication comprehensively surveys the rapidly growing field of household food security measurement, providing summaries of all studies released since 1997 that use the US Food Security Survey Module. The report features summaries of 40 reports from 22 states and Canada.

**Hunger in the United States - A Summary of Recent Studies on Hunger and Emergency Food Demand** (August 2000). Designed as an annotated resource guide, this report summarizes the objectives and findings of over 50 hunger-related studies conducted in the US since 1998. These studies use methods other than the US Food Security Survey Module.

BEST COPY AVAILABLE

[2] Definitions published in 1990 by the Life Sciences Research Office (LSRO) of the Federation of American Societies for Experimental Biology.

**U.S. Department of Education**
*Office of Educational Research and Improvement (OERI)*
*National Library of Education (NLE)*
*Educational Resources Information Center (ERIC)*

# NOTICE

## Reproduction Basis

[X] This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

[ ] This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").